

Amendment to the Abstract

A sensor for detecting particulate matter in an exhaust stream of an engine. The sensor may be a spark-plug-like device having an extended center electrode composed of a stainless steel or other material. The electrode may have a thin ~~pacivating~~passivating layer formed on it. The layer may be grown or deposited on the electrode within the exhaust system. The sensor may detect charge transients indicative of particulate concentration in the exhaust stream. Information about particulate matter in the exhaust system along with other engine information may be processed for controlling or adjusting parameters of the engine to affect the particulate matter in the exhaust system.